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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,991	11/30/2001	Witold Neter	213201.00137	6106
27160	7590	01/05/2004	EXAMINER	
PATENT ADMINSTRATOR KATTEN MUCHIN ZAVIS ROSENMAN 525 WEST MONROE STREET SUITE 1600 CHICAGO, IL 60661-3693			LUK, EMMANUEL S	
			ART UNIT	PAPER NUMBER
			1722	
DATE MAILED: 01/05/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.



<b>Office Action Summary</b>	Application No. 09/996,991	Applicant(s) NETER ET AL. 	
	Examiner Emmanuel S. Luk	Art Unit 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 176-184 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 176-184 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 106-110, 114, 123-125, 134-140, 167, 168, 170 and 172 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 08-103948.

JP 08-103948 teaches the claimed apparatus having an end of arm tool with at least one holder (51), cooling pin comprising of cylindrical projections (146) on frames (32), the frame being also the cooling plate, the cooling plate and arm tool being movable away from one another (Fig. 9), the cooling pin having an internal channel (349) terminating at the tip (148), the cooling pin is connectable to a cooling fluid delivery system (16), tip of the pin spaced away from the first region (Fig. 6), the fluid from the tip in direction to cool the first region via channels in the tip (C2), the frame allowing the article (P) to be spaced away from the pin and thus allowing for venting of the cooling fluid into the atmosphere (Fig. 3a). The pin having a depth so that the tip can allow material to flow to reach the internal dome portion of the preform (Fig. 3b), the tip having the divergent nozzle construction and straight walled nozzle construction (Fig. 3b) for focusing the cooling fluid towards the region principally surrounding the first region. The cylindrical projections (146) accommodate an equal number of cavities in the mold.



The takeout plate being separate from the mold would naturally conductively cool the exterior of the preform as it is being carried from the mold to the frame.

The flow of the cooling medium throughout the interior surface of the product additionally cools the sprue gate portion, the neck portion and the threaded portion.

The formation of PET preforms by the apparatus is also an intended use. The structure of the claimed apparatus is taught by the prior art and the limitation pertaining to the product does not further limit the structural limitation of the apparatus.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein



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were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 99-105, 111-113, 115-122, 126-133, 141-166, 169, 171 and 173-175 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 08-103948 in view of Bellehache et al.

JP 08-103948 teaches the claimed apparatus having an end of arm tool with at least one holder (51), cooling pin comprising of cylindrical projections (146) on frames (32), the frame being also the cooling plate, the cooling plate and arm tool being movable away from one another (Fig. 9), the cooling pin having an internal channel (349) terminating at the tip (148), the cooling pin is connectable to a cooling fluid delivery system (16), tip of the pin spaced away from the first region (Fig. 6), the fluid from the tip in direction to cool the first region via channels in the tip (C2), the frame allowing the article (P) to be spaced away from the pin and thus allowing for venting of the cooling fluid into the atmosphere (Fig. 3a). The pin having a depth so that the tip can allow material to flow to reach the internal dome portion of the preform (Fig. 3b), the tip having the divergent nozzle construction and straight walled nozzle construction (Fig. 3b) for focusing the cooling fluid towards the region principally surrounding the first



region. The cylindrical projections (146) accommodate an equal number of cavities in the mold.

The takeout plate being separate from the mold would naturally conductively cool the exterior of the preform as it is being carried from the mold to the frame.

The flow of the cooling medium throughout the interior surface of the product additionally cools the sprue gate portion, the neck portion and the threaded portion.

JP 08-103948 fails to teach a stripper, second cooling means for the exterior surface and vacuum, valve, distance ratio, varying diameter, grooves, ribs and contacts, and reduction of crystallinity.

Bellehache teaches means for cooling the preforms (5) at the apparatus via circulating atmospheric cooling air. The preforms are removed from the mold via pneumatic grips (25) that act as strippers and holds the preform in place. Bellehache teaches a first circuit (F4) for flowing air to the interior surface and a second circuit (F2) for flowing air to the exterior surface, and a suction conduit (12) provides the cooling air to flow through and also holds the preform in place (Col. 3, lines 13-17).

In regards to claims 115, 126 and 169, the ratio of the first distance to second distance of the cooling pin to the molded article is a change in size and shape of the cooling pin. It would have been obvious to one skilled in the art to modify JP 08-103948 with changes in form or shape as choice of design. In re Dailey et al, 149 USPQ 47 (CCPA 1966).

In regards to claims 122, 133, 156 and 166, the cooling at the rate that prevents substantial crystallinity formation in the tip of the preform is an intended use of the



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apparatus in the formation of the product. The rate of cooling is a process limitation in the apparatus claims.

In regards to claims 118, 129 and 171, the pump (16) can regulate the coolant flow rate. One skilled in the art recognizes that the pump flow rate can forgo the need of a valve in controlling the coolant flow rate.

It would have been obvious to one of ordinary skill in the art to modify JP 08-103948 with a stripper and external cooling means as taught by Bellehache because it allows for improved cooling of the preform by providing active external cooling in addition to the internal cooling provided by JP 08-103948.

### ***Response to Arguments***

7. Applicant's arguments filed 10/14/2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).



The argument set forth by the applicants concerning the tip and the first region is not persuasive. There is no clear determination of where this 'first region' is claimed structurally and additionally, JP 08103948 shows the channel that terminates in the tip region. As seen by the reference the flow of the coolant is further in a slanted direction from the tip and since the definition of first region is broad, there is cooling of the first region. There is no clear definition, or boundary, between the first region and tip of the preform and thus the JP 08103948 reference teaches the claimed invention. That there are additional diffusion holes does move away from the fact that the channel terminates at the tip and that coolant flows to regions that can be interpreted as tip and first region areas.

In regards to the applicant's argument of the crystallization of the preform, the concerns of the product properties has no bearing on the issue of structural limitations on the invention itself since these are apparatus claims. The discussion of when the cooling should occur, especially discussion of time critical cooling, is a process limitation and moves away from the structural limitations that are at issue in the claimed apparatus.

Ballehache is used to teach the stripper, cooling the exterior and suction to hold in place. JP 08103948 teaches the internal cooling and also teaches internal cooling, thus one skilled in the art would recognize the combination of JP 08103948 and Bellehache.



***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (571) 272-1134. The examiner can normally be reached on Monday-Thursday 7 to 4 and alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.



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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-0987.

EL

  
W. L. WALKER  
SUPERVISORY PATENT EXAMINER  
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